



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/721,660

11/25/2003

Senthil Natesan

N0178US

7410

37583 7590 01/16/2008
NAVTEQ NORTH AMERICA, LLC
425 West RANDOLPH STREET
SUITE 1200, PATENT DEPT
CHICAGO, IL 60606

EXAMINER

LIN, SHEW FEN

ART UNIT

PAPER NUMBER

2166

MAIL DATE

DELIVERY MODE

01/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/721,660

Applicant(s)

NATESAN ET AL.

Examiner

Shew-Fen Lin

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- a. This action is taken to response to Request for Continued Examination filed on 9/18/2007.
- b. Claims 47-65 are pending. Claims 47, 56, and 64 are independent claims.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 18, 2007 has been entered.

Response to Amendment

The Declaration under 37 CFR 1.132 filed March 30, 2007 is sufficient to overcome the US 6,278,939 reference.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 56-63 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 56 recites the use of various components and elements that would be reasonably understood by one of ordinary skill in the art to mean software, software based component implementation, or an abstract concept based on software. Examples of components and concepts used in the claim are: a repository for geographic data, a route calculation application, a geographic data, a geographic data providing application, and other such terms that are interpreted to mean abstract concepts and software implementations. There are no definitive hardware or physical components associated with these examples in the claims or in the specification.

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best functional descriptive material *per se*.

Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of

technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed Cir. 1994).

Merely claiming nonfunctional descriptive material, i.e., abstract ideas stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

Regarding claims 57-63 depend from rejected claim 56, comprise the same deficiencies as those claims directly or indirectly by dependence, and are therefore rejected on the same basis.

Claim Objections

Claim 47 recites the limitation "the geographic sub-area", "said parcel", "said route". There is insufficient antecedent basis for the limitations in the claim. In addition, for the limitations "the geographic sub-area ", "said geographic sub-area" to refer to the same geographic sub-area previously introduced, the Examiner suggests using either "said" or "the".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 47-61, 64-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Livshutz et al. (European Patent Application, EP 0943894A2, 9/22/1999, hereinafter Livshutz).

As to claim 47, Livshutz discloses a method of operation for a navigation system (Fig. 1) comprising: using a repository for geographic data, wherein the repository contains a plurality of pre-computed parcels of geographic data, wherein the geographic data in each parcel represent geographic features contained in a separate one of a plurality of geographic sub-areas into which a geographic region is divided (Figs. 5, 7-9, abstract, paragraph 0043,0044, geographic database includes a plurality of data records that represent geographic features, the plurality of records are organized into a plurality of parcels); calculating a route from an origin to a destination (Fig. 5, 136, paragraph 0012, 0023, route calculation); identifying the geographic sub-areas that are crossed by the calculated route (paragraph 0009, 0073) ; and providing to a local memory from said repository said parcels that contain the data that represent the geographic features encompassed in said geographic sub-areas said route passes through (paragraph 0009, 0031,0033,0045, the navigation application program is being run, it would be desirable to load into memory only those data that are needed to perform a desired function and data are organized into parcels).

As to claim 48, Livshutz discloses the method of claim 47, wherein said parcels of geographic data are less than a maximum data size (paragraph 0043).

As to claim 49, Livshutz discloses the method of claim 47, further comprising: on a server, receiving a request for said route (paragraph 0020, the input information may include a request for a route to a desired destination); and sending to a client computing platform said parcels corresponding to said geographic sub-areas said route passes through to a client computing platform (paragraph 0112, client-server platform).

As to claim 50, Livshutz discloses the method of claim 47, further comprising: storing said provided parcels in a memory (Figs. 1, 8, paragraph 0045, lines 6-8).

As to claim 51, Livshutz discloses the method of claim 47, further comprising: using data from said provided parcels to display a map (Fig. 5, 137, paragraph 0035, using these different layers of cartographic data, the map display function can provide rapid panning and zooming.)

As to claim 52, Livshutz discloses the method of claim 47, further comprising: using data from said provided parcels to explicate said route (paragraph 0023, lines 13-15, route guidance, wherein detailed directions are provided for reaching a desired destination).

As to claim 53, Livshutz discloses the method of claim 47, further comprising: using data from said provided parcels to find information about a point of interest based upon specified criteria (Fig. 5, 139, paragraph 0026, point-of-interest, such as a hotel or civic center, a boundary of a natural feature, such as a lake, or a position along a railroad track or ferry.).

As to claim 54, Livshutz discloses the method of claim 53, wherein the specified criteria include location-based criteria (paragraph 0026, The location 114 may correspond to a position of a point-of-interest, such as a hotel or civic center, a boundary of a natural feature, such as a lake, or a position along a railroad track or ferry. The locations 114 may correspond to anything physically located in the geographic area 112).

As to claim 55, Livshutz discloses the method of claim 47, wherein the repository includes a plurality of collections of geographic data, wherein each collection represents the entire geographic region, wherein each collection is organized into a plurality of parcels, each of said parcel is less than a maximum size and wherein the parcels in one of said plurality of collections contains data that represents different attributes of the represented geographic features than the parcels in another of said plurality of collections (Figs. 9, 11, abstract, paragraph 0014, 0030, 0043).

As to claim 56, Livshutz discloses a navigation system (Fig. 1) comprising: a repository for geographic data (Fig. 1, 32), wherein the repository contains pre-computed parcels of geographic data (Fig. 8), wherein each of the pre-computed parcels of geographic data corresponds to a separate one of a plurality of geographic sub-areas into which a geographic region is divided (Figs. 5, 7-9, abstract, paragraph 0043, 0044, geographic database includes a plurality of data records that represent geographic features, the plurality of records are organized into a plurality of parcels); a route calculation application that calculates a route from an origin to a destination (Fig. 5, 136, paragraph 0012, 0023, route calculation); and a geographic data

providing application that provides to a local memory from said repository a plurality of parcels corresponding, to said geographic sub-areas said route passes through (paragraph 0009, 0031,0033,0045, the navigation application program is being run, it would be desirable to load into memory only those data that are needed to perform a desired function and data are organized into parcels).

As to claim 57, Livshutz discloses the method of claim 56, wherein said pre-computed parcels of geographic data have a substantially uniform data size (paragraph 0081, maintain a uniform parcel size among the parcels within the layer).

As to claim 58, Livshutz discloses the method of claim 56, wherein said repository for geographic data and said geographic data providing application are associated with a server (paragraph 0112, client-server platform).

As to claim 59, Livshutz discloses the method of claim 56, further comprising: a route guidance application that uses data contained in said parcels from said local memory to provide maneuvering instructions for following said route (Fig. 5, 138, paragraph 0023, lines 13-15, route guidance, wherein detailed directions are provided for reaching a desired destination).

As to claim 60, Livshutz discloses the method of claim 56, further comprising: a map display application that uses data contained in said parcels from said local memory to provide a map of said route on a display (paragraph 0002, show detailed maps on computer displays

outlining routes to destinations, the types of maneuvers to be taken at various locations along the routes, locations of certain types of features, Fig. 5, 137, paragraph 0035, using these different layers of cartographic data, the map display function can provide rapid panning and zooming).

As to claim 61, Livshutz discloses the method of claim 56, further comprising: a positioning application that uses data contained in said parcels from said local memory to determine a position of a end user computing platform relative to roads represented by data contained in said parcels (Fig. 1, 24, paragraph 0028, provide geographic positions).

As to claim 64, Livshutz discloses a method of operation for a navigation system (Fig. 1) comprising: using a repository for geographic data, wherein the repository contains a plurality of parcels of geographic data, wherein each of said parcels contain routing data corresponding to a separate one of a plurality of geographic sub-areas into which a geographic region is divided (Figs. 5-9, abstract, paragraph 0043,0044, geographic database includes a plurality of data records that represent geographic features, the plurality of records are organized into a plurality of parcels); calculating a route from an origin to a destination (Fig. 5, 136, paragraph 0012, 0023, route calculation); and providing to a local memory from said repository a plurality of parcels of routing data corresponding to geographic sub-areas located along said route (paragraph 0009, 0031,0033,0045, the navigation application program is being run, it would be desirable to load into memory only those data that are needed to perform a desired function and data are organized into parcels).

As to claim 65, Livshutz discloses the method of claim 64, further including: using data from said parcels in said local memory to provide navigation- related features (paragraph 0023).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 62-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Livshutz in view of Drury et al. (US Patent 6,707,421, hereinafter Drury).

As to claims 62-63, Livshutz discloses navigation application provide these various navigation features and functions including route guidance and destination resolution capabilities (paragraph 0023, Livshutz) but does not explicitly disclose determining whether an end user computing platform has departed from said route and wherein if said end user computing platform has departed from said route, said positioning application calculates a way back to said route.

Drury discloses determining whether an end user computing platform has departed from said route (Fig. 17, column 20, lines 39-58, if at any time the difference between the dead reckoning position and the (D)GPS based position is more than the off-route tolerance, then a off-route routine is initiated) and wherein if said end user computing platform has departed from said route, said positioning application calculates a way back to said route (column 9, lines 15-36, detect when the vehicle has diverged too far from the planned route. When it detects that the vehicle is off-route, it plans a corrected route based on the main roads map shown in FIG. 10 which get the vehicle back onto the originally planned route).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Livshutz 's disclosure to include determining if an end user computing platform has departed from the planned route and planning a corrected route to get back onto the originally planned route as taught by Drury for the purpose of providing the operator with instructions to continue to guide the vehicle to the destination despite the error (column 5, lines 13-17, Drury). The skilled artisan would have been motivated to improve the invention of

Livshutz per the above such that navigation system will guide the operator to the destination even if the operator could be off-route due to error or stop by point of interest.

Response to Amendment and Remarks

Applicant's arguments with respect to claims 47, 56, and 64 have been fully and carefully considered but are moot in view of the new ground(s) of rejection.

Related Prior Arts

The following list of prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Friederich, Matthew et al., US 20010043745 a1, "Method and system for compressing data and a geographic database formed therewith and methods for use thereof in a navigation application program".
- Katayama, Mutsumi et al., US 20010029429 A1, "Mobile navigation apparatus".
- Sharp; Christopher Edward et al., US 6526284 B1, "Transmission of geographic information to mobile devices".
- Saeki; Toshiaki et al., US 6320518 B1, "Map data transmitting apparatus, and computer readable recording medium having computer readable programs stored therein for causing computer to perform map data transmitting method".
- Machii; Kimiyoshi et al., US 6324467 B1, "Information providing system".
- Ashby; Richard A. et al., US 6038559 A, "Segment aggregation in a geographic database and methods for use thereof in a navigation application".

- Fowler; Andrew et al., US 6212474 B1, "System and method for providing route guidance with a navigation application program".
- Crowley; Paul et al., US 6073076 A, "Memory management for navigation system".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 14, 2007

Shew-Fen Lin
Patent Examiner
Art Unit 2166


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER